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Abstracts of Short Communications and Posters

Section:

3. Number Theory and Arithmetic Algebraic Geometry

1991 MS Classification: 11F
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Bol's identity, fractional differentiation and automorphic integrals
Bol's identity allows one to map automorphic forms (and also Eichler integrals) of nonpositive integral weight k to automorphic forms of complementary weight $2-k$. We investigate a generalization of Bol's identity to nonintegral weights. Specifically, we examine the transformation behaviour of functions which result from the fractional differentiation of forms (and integrals) on certain subgroups of $SL(2,\mathbb{R})$ which have arbitrary real weight and multiplier system. We also present an operator which maps forms of any real weight k to forms of weight $2-k$.